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Attachment to: ^{006 M74}
Dated 11 JUL 1974 ³⁷

COMMUNICATIONS ENGINEERING QUARTERLY

NARRATIVE REPORT

1 April - 30 June 1974

I. COVERT ENGINEERING DIVISION (CED)

A. Operational requirements for [] covert communications terminals were levied on CED during this quarter. During the same time frame, [] terminals were deployed to the field. All backlogged requirements for SV/A-4 Secure Voice systems were completed. This included Area Headquarters contingency systems. Barring complications stemming from non-stock frequency requirements, turn-around time on new SV/A-4 requirements will be three to four weeks.

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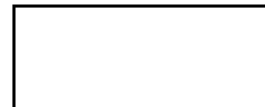
C. Six Service Test Model SV-8 Secure Voice systems have been completed. Of the six STM's, two are in COMSEC, two are in the Quality Assurance Branch of CED, and two have been retained in the Quick Reaction Section of CED for testing and for interface with tape recorders and data terminals.

D. A significant number of [] keyboard membrane failures were reported during this quarter. The failure, which took three years to surface, is characterized by a black substance oozing from under the keyboard template. This substance was subsequently identified as the keyboard's polyester membrane reverting to its natural state after being subjected to prolonged heat/humidity climatic conditions. [] is in the process of revulcanizing

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H. The SV-4 Improvement Program was completed with the assistance of two TDY technicians from OC-S/CMD. [redacted] are to be complimented for their efforts in completing this worldwide modernization. From all reports received, the Areas visited were pleased with the results of this program.

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I. The SX-6 Spread Spectrum transceiver was tested by the manufacturer, [redacted] The units performed well and have been returned to the Covert Communications Facility for further testing.

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J. The [redacted] supplied a quote regarding the retrofit of the MM-1 Microwave system with a new type oscillator. The present Gunn Oscillator is no longer available. Their proposal was for \$48,000 to finalize the design changes required and to retrofit the first unit. OD&E has contracted for two MM-1's to be retrofitted and work was in progress as the quarter closed.

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K. The MS-10 Frequency Survey Package has been modified by the contractor [redacted] to include two additional markers. The first unit was completed and the second system is presently undergoing the same changes. This modification will permit a better range of markers that can be recorded on the chart paper when making a frequency survey.

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II. ENGINEERING SUPPORT DIVISION (ESD)

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A. A contract was entered into with [redacted] to perform modifications on a number of [redacted] transceivers. As the modifications were completed and the transceivers delivered (and accepted), progress payments were made to [redacted]. Unfortunately, [redacted] while accepting these payments chose to ignore the U. S. tax laws and had been contacted by the Internal Revenue Service who also contacted the Office of Logistics with regard to diverting payments from [redacted] to the IRS. The Technical Support Branch/ESD was requested to expedite T&I and perform minor adjustments in an effort to facilitate acceptance. Out of a total of 33 [redacted] four were accepted and 29,

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rejected. An additional check was made on in-stock [] and out of a total of 15, thirteen did not meet specifications.

B. Additional stations have been included in the TECHREQ system for Repair/Return support. To date, there are [] receiving Headquarters support from []

C. The Chairman of the Communications Equipment Board has approved the formation of a task force to prepare a cost analysis study of a worldwide test equipment calibration program utilizing the Department of Air Force Precision Measurement Equipment Laboratories and secondary standards located in certain OC areas. However, due to other work load requirements, the study will not be initiated until after the summer personnel rotations.

D. From 13 March through 26 April, of the total number of items that have passed through the T&I Section, 25 percent have been for the Office of Communications, 75 percent for other Agency components which include 35 percent []

E. Because of an inordinate amount of rejections, representatives from [], visited the R&R Section of TSB to review our test and inspection procedures. After verification by all concerned that our method of acceptance testing was the same as the method used at [] the faulty items were returned for repair.

III. STAFF ENGINEERING DIVISION (SED)

A. The Communications Requirements Determination progressed well, with the major emphasis being placed on secure voice requirements. Inputs on present and future secure voice requirements were received from Agency components and were compiled and summarized. The resultant information is being used both in the Voice Communications Improvement Plan and in the requirements determination itself. The Phase I requirements report, addressing those known requirements which are the object of existing or planned systems, was coordinated within OC and has been distributed to all Agency components for their validation or suggested modification. The study now includes narrative, data, secure voice and facsimile requirements. The completion of this effort is anticipated in the first quarter of FY-1975.

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B. Proposals were received from four bidders for the secure voice Trunk Switch and Operator Consoles. Following technical and cost evaluations and final negotiations, a contract was awarded to [REDACTED]

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The Headquarters Area Transmission System study, recommending broader use of Agency owned and maintained broadband microwave in the Washington area, was completed and presented to the OC Equipment Board. Approval was given to proceed with the program as outlined, subject to the availability of funds. The demand for facsimile service continued to increase with six additional DACOM units being procured during the quarter.

C. Changes to the three ARS systems currently being produced included the adoption of a new software assembler, the addition of key punch and card reader equipment at one location, and the addition of 32K sixteen bit words of core for each system. ARS site surveys were conducted in [REDACTED] and those locations were provided with detailed installation information. One week of system operational training was provided for personnel destined for [REDACTED] as was six weeks of maintenance training for technicians for those sites. Pre-acceptance testing of the first system is currently scheduled to commence on 22 July.

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D. A leased line was provided between the DATEX test bed in [REDACTED] and the Headquarters DATACOM facility, and testing via this line extended through the quarter. The applications programming effort fell behind schedule early in the quarter, and in spite of the fact that all of the programmers have been working 48-hour weeks, no time was regained. Due to the schedule slippage of approximately three weeks, and to the reduction of personnel available for training as a result of operational requirements, all operator training will now be accomplished on-site. Pre-acceptance testing of the DATEX system is currently scheduled to commence on 12 August.

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E. The Cable Dissemination System (CDS) contract was awarded to [REDACTED] in April. The CDS Project Team participated in detailed design discussions with the contractor, and the Project Engineering Plan was nearing completion at the end of

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the quarter. [redacted], who developed MAD software for CRS, was awarded a sub-contract to develop the text analysis software for CDS. The four Agency programmers assigned to the project successfully completed their training at the [redacted] facility. A CDS Interface Coordination Group, with representatives from OC-E, OC-O/DO, CRS, OJCS, and DDO/ISG, was established to define the interfaces between the CDS and the Agency information processing systems. Other highlights of the quarter included a detailed study of the originating system functions of the Automated Communications Terminal and the procurement of a new Optical Character Reader for CDS. 25X1A5A1

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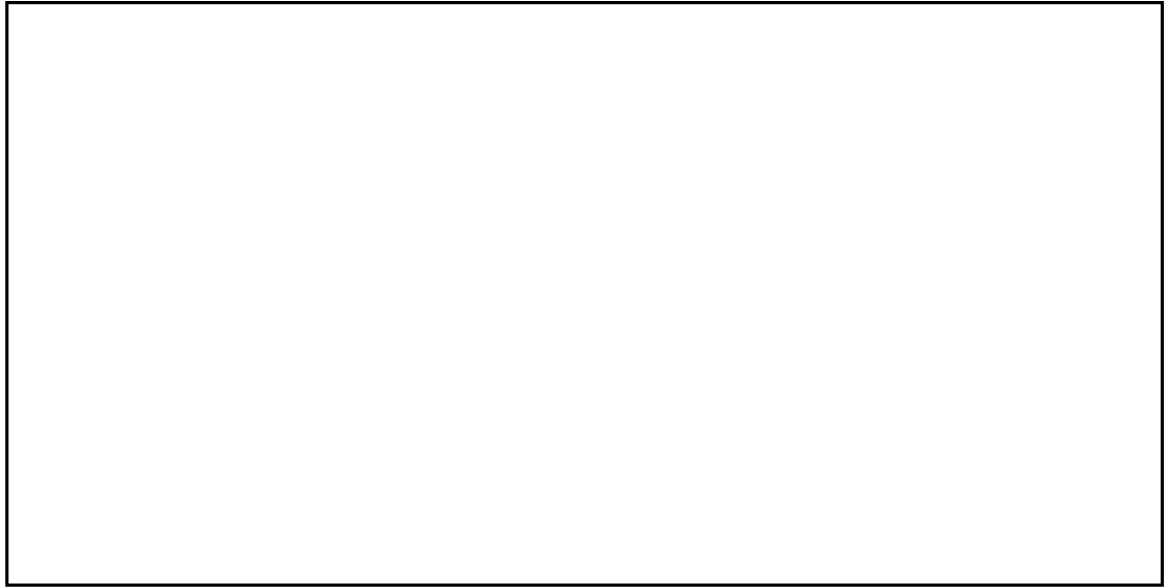
F. Three companies submitted proposals for the Computer Assisted Field Terminals (CAFT). Technical evaluations were performed by the [redacted] team, with each proposal being found conditionally acceptable. On completion of the cost evaluation, it was apparent that the cost of the systems to the Government could not be justified for the benefits to be derived. It was decided not to proceed with a CAFT procurement in FY-1974, but rather to reassess the objectives of the program in the context of the worldwide network and future requirements. Following that reassessment, a determination will be made as to which components of the network must be modified and what modifications must be made, to accomplish the objectives. The Automated Field Terminal (AFT) program, planned to provide a greater degree of automation to the field terminals if warranted, is also being held in abeyance pending completion of the reassessment in approximately six months. The prototype CY-6 computerized replacement for the HL-6, which was developed as an add-on to the prototype CAFT program, continues to undergo operational testing. This testing has been complicated by hardware problems, some of which may be due to environmental conditions, and by limited availability of manpower to perform regular testing. 25X1A

G. A report on [redacted] was completed and submitted to the OC Executive Board. The report noted problem areas inherent in the concept of a transportable base station and provided technical, manning, and funding information on three possible [redacted] configurations. It was recommended that, if [redacted] were to be pursued, it be in the form of a "BLACK MUX" and 25X1A2D1 25X1A2D1 25X1A2D1

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25X1A2D SKYLINK terminal installation. At the quarter's end, OC-0 was performing a study of the operational need for [] which study is to be coordinated with Engineering.

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I. SC-1/SC-2 Procurement - Five SC-1 Satellite field terminals were procured in June. This procurement was programmed for FY-75 but was interchanged with an SC-2 satellite entry terminal procurement that was programmed for FY-74, thus allowing a substantial cost savings. The SC-2 procurement package has been prepared and a bid that is effective until 30 July, was received from the contractor.

J. Contract Awards during the quarter:

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June. To reduce the troublesome RFI levels, a new ground system and an HF Miniloop antenna were installed at the [] facility. This effort achieved an 80% to 90% noise reduction at this important station.

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